REMARKS

This is in response to the Office Action mailed on January 10, 2005, and the references cited therewith.

Claims 3, 10 and 12 are amended. Claims 7 and 8 are canceled. Claims 24-29 are added. As a result, claims 1-6, and 9-24 are now pending in this application.

Claims 3 and 12 were amended to overcome the objections to the specification.

§112 Rejection of the Claims

Claims 7 was rejected under 35 USC § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 7 and dependent claim 8 have been cancelled, rendering the rejection moot.

§102 Rejection of the Claims

Claims 1-6, 9-11, 13-15 and 21-23 were rejected under 35 USC § 102(b) as being anticipated by MacDonald et al. USPN 5,628,917 (herein after as "MacDonald"). This rejection is respectfully traversed, as MacDonald et al. does not form a two level structure.

Claim 1 recites steps that provide "A method of forming two level structures...". A two level structure had not been formed by MacDonald et al. The Office Action states that it does so, but does not point out how such a two level structure is created by the MacDonald et al. method. MacDonald et al. is a method to achieve high aspect ratio etching of silicon structures, not to create multiple level structures in silicon.

Claim 1 recites that the wafer is oxidized **until** lines of thinner width are substantially fully oxidized. This means that the thicker width lines are not fully oxidized. Further etching of the exposed first floor deeper into the substrate to form a second floor as claimed, enables the formation of a two level structure, as illustrated at least in FIG. 1D. A first level 150, supports a line 115, while the second floor supports wider lines. This is different than the process shown in MacDonald et al., where thermal silicon dioxide "...is grown to completely oxidize the structural beams of the device...as depicted in FIG. 1i." Col. 5, lines 52-56. Thus, both thin and thick lines are fully oxidized, and the further etching only results in the same lines being made longer as

shown through FIG. 1n. Thus, the MacDonald et al. process is different from that claimed, and does not result in a two level structure as claimed. Since at least one claimed process element is different from MacDonald et al., and the result of the process is also different, a proper prima facie case of anticipation has not been made, and the rejection should be withdrawn.

Claims depending from claim 1 are believed allowable for at least the same reasons as claim 1.

Independent claim 10 has been amended to point out that thicker lines are not fully oxidized. As indicated above with respect to claim 1, this results in the formation of a multiple level structure when the next floor is formed. This claim is now believed allowable, and the rejection should be withdrawn.

Claims 11-15 depend from claim 10 and are believed allowable for at least the same reasons as claim 10.

Claim 21 is similar to claim 1, in that it recites that the wafer is oxidized until lines of thinner width are substantially fully oxidized. Again, this means that thicker width lines are not fully oxidized, allowing the formation of the two level structure. Claims 21-23 are believed to distinguish the reference for at least the same reasons as claim 1. The rejection should be withdrawn.

§103 Rejection of the Claims

Claims 7-8 were rejected under 35 USC § 103(a) as being unpatentable over MacDonald et al., as applied to claim 6 above, and further in view of Glodback et al. USPN 6,780,337. Claims 7 and 8 were cancelled, making this rejection moot.

Claim 12 was rejected under 35 USC § 103(a) as being unpatentable over MacDonald et al., as applied to claim 11 above, and further in view of Groechel et al. (USPN 5,021,121). Claim 12 is believed allowable for at least the same reasons as claim 11, which distinguishes from MacDonald. Further, Groechel et al. does not provide the element missing from MacDonald et al.

New Claims

New claim 24 is similar to allowable claim 16, but references anisotropically etching the oxide to expose the first floor instead of specifically reciting a CHF_3 reactive ion etch. It also recites that lines of a selected width are oxidized, again resulting in the ability to form two level structures. New claims 25-26 depend from claim 24 and are believed allowable for at least the same reasons. New claim 27 depends from claim 2, and specifies that lines are released to form a released two level structure. It is believed allowable because MacDonald et al. does not show such a structure, and at least for the reasons claims 1 and 2 are believed allowable. Claims 28 and 29 depend from claim 11, and describe the effects of successive oxidations. They are believed allowable for at least the same reasons as claims 10 and 11.

Allowable Subject Matter

Claims 16-20 are allowed.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6972 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

KANAKASABAPATHI SUBRAMANIAN ET AL.

By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. Box 2938
Minneapolis, MN 55402
(612) 373-6972

Date 4/28/2005

By _____
Bradley A. Forrest
Reg. No. 30,837

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 28th day of April, 2005.

Dawn M. Poole
Name

Dawn M. Poole
Signature